

## SARL NEWS - SUNDAY 9 SEPTEMBER 2012

You are listening to ZS6SRL, the official radio station of the South African Radio League, the national body for amateur radio in South Africa, with a news bulletin every Sunday at 08:15 CAT in Afrikaans and at 08:30 CAT in English. To listen to a web stream, visit [www.sarl.org.za](http://www.sarl.org.za), click on 'Amateur Radio Today' and follow the links for details. For audio via Echolink, connect to ZS0JPL-R.

You can download this bulletin and previous ones from [www.sarl.org.za](http://www.sarl.org.za) and also subscribe to receive future bulletins by e-mail.

Your newsreader this morning is (name), (call sign), on 145,725 and 7,066 MHz from Pretoria, with relays on 3,695 MHz SSB. (Other newsreaders change to suit).

In the news today:

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ANOTHER SA CUBESAT ON THE CARDS

MTN RADIO AMATEURS OF THE YEAR AWARDS

CARRIER AM - SOMETHING OLD IS NEW AGAIN SAYS A AMATEUR RADIO NEWSLINE REPORT

You are listening to ZS6SRL. Stay tuned for more details on these and other important and interesting items.

RADIO TECHNOLOGY IN ACTION SYMPOSIUM - LAST STOP CAPE TOWN

The last in the 2012 series of the SARL Radio Technology in Action Symposiums will be held in Cape Town on 29 September 2012 at the Cape Peninsula University of Technology Bellville Campus. The full programme and registration forms are now available on [www.sarl.org.za](http://www.sarl.org.za). Click on RTA or the link in the news update centre stage on the home page.

The programme offers some interesting presentations. Tony Voorveld is back with a presentation called "Tuning into Nature". He will focus on various electromagnetic phenomena that appear in nature. He will explain by discussion and demonstration how phenomena such as Solar Flares, Cosmic Rays and Lightning may be detected by amateur radio and amateur scientific equipment. He will also be discussing radio astronomy for the amateur. The presentation was highly acclaimed in Durban and Gauteng where Tony presented.

Another Cape Town exclusive is a presentation and demonstration on MMANA, a freeware antenna simulation program by Raoul Coetzee, ZS1REC. You will learn how to simulate basic wire antennas, how to do impedance matching,

tune for resonance and observe SWR and bandwidth curves to mention some facilities.

Last week's RTA in Port Elizabeth was also attended by a record number of radio amateurs following similar trends as RTA in the other cities. One of the highlights in Port Elizabeth was the Presentation on the SKA by Jason Manley of the SKA office in Cape Town.

The challenge is for the Western Cape radio amateurs to beat the Gauteng record of close to 100 participants. Please make use of the pre-booking facility and stand a chance to win an ARRL Basic Antenna Book. Prebooking assures that we will have stock of the SDR 80 metre kit as well as the CD. It also will assist with catering. The booking form can be downloaded from [www.sarl.org.za](http://www.sarl.org.za).

#### **SARL YOUTH COUNCIL- YOUR INPUT IS NEEDED**

Some time back the idea of creating a youth council to organize and manage youth events was proposed. The SARL is looking for volunteers from radio amateurs under 25 to put forward names for consideration. Here clubs can play an important part to nominate candidates. Send details such as name, callsign, age, address and email to [secretary@sarl.org.za](mailto:secretary@sarl.org.za).

#### **ANOTHER SA CUBESAT ON THE CARDS**

Twenty Interns at the Denel Dynamics Engineering Academy of Learning are designing and building a CubeSat as part of their internship training. Denel Dynamic takes on up to 20 interns, students who have completed their engineering degree, masters or PhD. During the first year they spend half their time in the Academy and the other half in their designated departments. "The programme is aimed at exposing interns to a complete product development cycle", said Grant Wilson who leads the Academy. "Designing and building a CubeSat and developing a ground station to manage the satellite is an ideal project to achieve this."

The 20 strong Intern Project Team was split into three separate teams, each responsible for certain aspects of the project. Team Ground Zero is responsible for the ground station and radio frequency (RF) link components. Team Virtuoso is responsible for the cube structure and on-board computer; and Team Frodo is responsible for the payload, Attitude Control and Determination System (ADCS), and the launch. Read more about DynaCube on [www.amasatsa.org.za](http://www.amasatsa.org.za).

#### **MTN RADIO AMATEURS OF THE YEAR AWARDS**

Here is an opportunity to recognize radio amateurs that has made a contribution to amateur radio. There are three categories:

**GARTH MILNE TECHNICAL INNOVATION AWARD** The award is made for the support, development and application of Technological Innovation in Amateur Radio in South Africa. The recipient will be a person who has promoted the use of technology in amateur radio at club level, nationally, at schools or a tertiary education institution.

**MTN RADIO AMATEUR OF THE YEAR AWARD** The award is made for the support and development of the Amateur Radio Service in South Africa, not for individual achievements such as DXCC and other operational awards or contests. The recipient will be a person who has given of his or her expertise and time to the promotion of Amateur Radio in South Africa.

**MTN AMATEUR RADIO COMMUNITY SERVICE AWARD** Annually the South African Amateur Radio Development Trust is recognising a radio amateur or a group of radio amateurs for service to the community.

Community service can be assistance to a handicapped radio amateur, communications support during a sporting event or a disaster situation like a road accident or a natural disaster like a flood, veld fires, or an earthquake. Nominations are invited for an individual or a group of people like a radio club, or an association.

Nomination forms are available on [www.amateurradio.org.za](http://www.amateurradio.org.za) or by sending a mail request to [saardt@intekom.co.za](mailto:saardt@intekom.co.za). The closing date for nominations is 30 September.

#### **CONTROLLED CARRIER AM - SOMETHING OLD IS NEW AGAIN SAYS AN AMATEUR RADIO NEWSLINE REPORT**

Back in the days of full carrier AM transmission one very popular and low cost way to put one's voice onto a carrier wave was to modulate the final power amplifier's screen grid. A variation on this that required no heavy modulation transformer was to vary the output power of the transmitter at an audio rate by varying the final amplifier's screen voltage at an audio rate. This system was called controlled carrier AM and it was made very popular on the amateur bands during the 1940's to 1960's in such budget priced transmitters as the Heathkit DX-35, DX-40 and DX-60 to name only a few.

With the advent of single sideband transmission, full carrier AM fell out of favour in the amateur radio world but it has remained a staple in the broadcast industry and other services. And now, carrier control modulation is making a comeback among broadcasters but not in the way it was done by radio amateurs of the past.

For broadcasters who spend 10's of thousands of Rands a year paying for electricity, the ability to raise and lower power levels can be a major cost cutting factor. And because of this a number of stations have received waivers from the FCC to experiment with several new forms of carrier control technology.

In one instance, transmitter manufacturer Harris Broadcast and New York City Powerhouse WOR-AM say they have had success with a power-saving Modulation Dependent Carrier Level algorithm. This with no effect on Arbitron Portable People Meter data encoding/decoding, the stations H-D Radio signal coverage or digital audio quality.

Harris engineers worked with Tom Ray, W2TRR, who is the Corporate Director

of Engineering WOR AM in New York, to test the compatibility of two Harris Modulation-Dependent Carrier Level algorithms. Amplitude Modulation Companding provided the largest reduction in transmitter power consumption, by saving 37 percent in average AC power input to the transmitter.

So will this new form of Amplitude Modulation Companding bring back full carrier AM to the amateur bands? While a tiny segment may decide to experiment with it more than likely SSB will remain the preferred voice system among amateur radio operators world wide. At least until it's replaced by a digital voice system at sometime in the future.

#### CONTEST NEWS

Boland Amateur radio club 40 m Sprint results: The July 2012 BARK sprint has drawn a total of 9 logs.

The winner of the competition was ZS3R with 80 points. In 2nd place was ZS6LH with 78 points and 3rd place went to ZS6APT with 77 points.

The various division winners were as follow: Division 2 - ZS2EC Division 3 - ZS3R Division 4 - ZS4BM Division 6 - ZS6LH

Certificates will soon be mailed the these winners.

No log sheets from Division 1 or 5 were received. Due to the poor participation in this competition, BARK has decided not to continue with this competition in the future.

2012 SARL HF CW Contest: The Contest Committee received twenty single operator logs and one check log for the CW Contest held on 26 August 2012. This is more than received for the 2011 contest.

Roger Jones, ZS6RJ, takes top honours with 116 points, followed by the West Rand ARC, ZS6WR, operarted by Joop, ZS6C, with 100 points and Barry Nugent, ZS2NF, with 94 points in third place.

Pierre van Deventer, ZS6A, made the most points on a single band with his 80 points on 40 metres. In the Club competition, Pretoria ARC leads the pack with 176 points, followed by Boland ARC with 166 points and the West Rand ARC with 146 points.

After adding up the totals for the HF Phone, Digital and CW contests to get the combined results, Pierre van Deventer, ZS6A, takes the first place with 318 points, followed by Mitchel Mynhaardt, ZS6YH, on 288 points and Brendon Muller, ZS4BM, on 276 points.

The winner of the Club Competition is the East Rand Branch with 812 points followed by the West Rand ARC with 519 points and the Pretoria ARC with 399 points.

The full list of results is available in HF Happenings 521. Congratulations to all the winners. Well done!

## PROPAGATION REPORT

Hannes Coetzee, ZS6BZP, reports that the solar activity is at moderate levels. Sunspot 1 564 remains a fairly large sunspot but there is only an isolated chance for M-class flares.

If you want to do your own frequency predictions, the expected effective sunspot number for the week will be around 85.

All the bands from 20 to 10 m will provide lots of DX fun with 15 m providing the best openings with 20 m not far behind. 10 m openings will be more frequent due to the increase in solar activity.

Please visit [www.spaceweather.co.za](http://www.spaceweather.co.za) for further information.

## DIARY OF EVENTS

10 September - Last day to enroll for the October RAE. 15 and 16 September - SARL VHF/UHF analogue and digital contest. 30 September - Nominations for MTN sponsored SAARDT awards to be in to [saardt@intekom.co.za](mailto:saardt@intekom.co.za) mailto: [saardt%40intekom.co.za](mailto:saardt%40intekom.co.za) .

SARL News invites clubs and individuals to submit news items of interest to radio amateurs and short-wave listeners. Submit news items - if possible - in both English and Afrikaans to [www.sarl.org.za/newsinbox.asp](http://www.sarl.org.za/newsinbox.asp), not later than the Thursday preceding the bulletin date.

The SARL also invites you to listen to Amateur Radio Today every Sunday morning at 10:00 CAT on 145,750 MHz in the Pretoria area, with relays on 7 082, 7 205 and 17 760 kHz. There is also a podcast by ZS6RO. For a web-stream and Echolink by ZS6FCS, visit [www.sarl.org.za](http://www.sarl.org.za), click on 'Amateur Radio TODAY', go down the green column and click on 'LISTEN ON THE WEB'. A repeat transmission can be heard on Mondays at 17:30 UTC on 3 230 kHz. Sentech sponsors the ARMI transmissions on the non-amateur frequencies.

You have listened to a bulletin of the South African Radio League, compiled by Martin Schwella, ZS4MS, and edited George Honiball, ZS6NE.

Thank you for listening, 73.

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